

CLAIMS

1. A system for the detection and operation of a Smart Card, comprising:
 - a socket for receiving a Smart Card; and
 - an integrated controller comprising a first logic set for detecting said Smart Card, a second logic set enabled by set first logic set for operating said Smart Card, MUX logic enabled by said first and second logic sets to provide communication between said Smart Card and a bus controller logic using conventional PC card communication protocols.
2. A system as claimed in claim 1, further comprising:
 - a second socket for receiving a PC Card;
 - said integrated controller further comprising logic to detect and operate said PC Card, said logic enabling said MUX logic to provide communication between said PC Card and said bus controller logic using said conventional PC Card communication protocols.
3. A system as claimed in claim 1, said integrated controller further comprising a bus interface to permit said bus controller logic to communicate with a bus.
4. A system as claimed in claim 3, wherein said bus comprises a PCI bus and said bus controller logic comprises PCI bus and conventional PC card communication protocols.
5. A system as claimed in claim 2, wherein said PC Card is selected from the group of a CardBus Card or a PCMCIA card.
6. A method for detecting and operating a plurality of expansion cards, comprising the steps of:
 - detecting that a card is inserted into a card socket;
 - determining the type of card using conventional PC Card signal lines;
 - enabling Smart Card reader logic or conventional PC Card reader logic when the type of

1 card is determined; and
2 enabling MUX logic to provide communication between said card and bus controller
3 logic using conventional PC Card communication protocols.

4 7. A method as claimed in claim 6, said step of determining the type of card further
5 comprising the steps of:
6 determining the signal state of a first and second card detection signal lines;
7 determining the signal state of a first and second voltage select signal lines;
8 determining if said first and/or second card detection signal lines, or said first and/or
9 second voltage select signal lines, comprise a signal state that is reserved by a PC Card signal
10 specification;
11 determining the signal state of a PC Card signal line that is unused during the detection of
12 a PC Card; and
13 determining the presence of an expansion card that complies with the PC Card
14 Specification and/or an expansion card that complies with a specification other than said PC
15 Card Specification based on the signal states of said first and/or second card detection signal
16 lines, and/or said first and/or said second voltage select signal lines, and/or said unused PC Card
17 signal line.

18 8. A method as claimed in claim 6, further comprising the steps of:
19 interfacing said card to a bus using said bus controller logic to provide communication
20 between said bus and said card.

21 9. A system for the detection and operation of a plurality of expansion cards, comprising:
22 a first socket for receiving a first expansion card that complies with the PC Card
23 Specification;

1 a second socket for receiving a second expansion card that complies with a specification
2 other than said PC Card Specification;

3 an integrated controller comprising first logic sets for detecting and operating said first
4 expansion card, second logic sets for detecting and operating said second expansion card, MUX
5 logic enabled by said first and/or second logic sets to provide communication between said first
6 and/or second expansion card and a bus controller logic using conventional PC card
7 communication protocols.

8 10. A system as claimed in claim 9, wherein said first card comprising a CardBus card.

9 11. A system as claimed in claim 9, wherein said second card comprising a Smart Card.

10 12. A system as claimed in claim 9, said integrated controller further comprising a bus
11 interface to permit said bus controller logic to communicate with a bus.

12 13. A system as claimed in claim 12, wherein said bus comprises a PCI bus and said bus
13 controller logic comprises PCI bus and conventional PC card communication protocols.

14 14. A system as claimed in claim 9, wherein said second logic set detects said second card
15 using convention PC Card signal lines.

16
17 15. An integrated controller for reading a plurality of expansion cards, comprising:
18 first logic sets for detecting and operating a first expansion card;
19 second logic sets for detecting and operating a second expansion card; and
20 MUX logic enabled by said first and/or second logic sets to provide communication
21 between said first and/or second expansion card and a bus controller logic using conventional PC
22 card communication protocols.

23 16. An integrated controller for reading a Smart Card, comprising:

1 a first logic set for detecting said Smart Card, a second logic set enabled by set first logic
2 set for operating said Smart Card, MUX logic enabled by said first and second logic sets to
3 provide communication between said Smart Card and a bus controller logic using conventional
4 PC card communication protocols.

5 17. A controller as claimed in claim 16, wherein said first logic set detects said Smart Card
6 using conventional PC Card signal lines.

7 18. A controller as claimed in claim 16, further comprising PC Card logic to detect and
8 operate a PC Card, said PC Card logic enabling said MUX logic to provide communication
9 between said PC Card and said bus controller logic using said conventional PC Card
10 communication protocols.

11 19. A controller as claimed in claim 16, further comprising a bus interface to permit said bus
12 controller logic to communicate with a bus.

13 20. A system as claimed in claim 19, wherein said bus comprises a PCI bus and said bus
14 controller logic comprises PCI bus and conventional PC card communication protocols.